

CAPITAL ASSET PRICING MODEL (CAPM) COST OF COMMON EQUITY ESTIMATES FOR WATER PEER GROUP, INCLUDING AMERICAN WATER, BASED ON KROLL NORMALIZED RISK-FREE RATE

	(1)	(2)	(3)	(4)
Company Name	D&P Recommended Risk-free Rate	Beta	Kroll Equity Risk Premium	CAPM Cost of Common Equity
American Water Works Company	3.82%	0.814	6.00%	8.70%
American States Water Company	3.82%	0.658	6.00%	7.77%
California Water Service Group	3.82%	0.678	6.00%	7.89%
Essential Utilities, Inc.	3.82%	0.805	6.00%	8.65%
Middlesex Water Company	3.82%	0.730	6.00%	8.20%
SJW Group	3.82%	0.758	6.00%	8.36%
Average		<u>0.74</u>		<u>8.26%</u>

Column 1 = Kroll (previously Duff & Phelps) Most Recent Guidance on Normalized Risk-free Rate as of October 18, 2022

Column 2 = Beta is a measure of the movement and relative risk of an individual stock to the market as a whole. I used a template provided by S&P Market Intelligence that calculates raw betas based on the Value Linen approach. This approach measures the covariance of the company's weekly returns with that of the S&P 500 divided by the variance of the S&P 500 returns over an historical 5 year period. This raw beta is then adjusted by the Blume formula, which is the following:
 Adjusted Beta = 0.35 + 0.67 * Unadjusted Beta

Column 3 = Kroll (previously Duff & Phelps) guidance as of October 18, 2022 on equity risk premium to be used in conjunction with a normalized risk-free rate of 3.5% or actual 20-year UST yield if above 3.5%.
[20221018_ERP-Rfr-Tables_v03.xlsx \(kroll.com\)](https://www.kroll.com/20221018_ERP-Rfr-Tables_v03.xlsx)

Column 4 = (Column 1 + (Column 2 * Column 3)).